

The Industrial Metaverse is "basically" a Digital Twin



OPERATIONAL
TECHNOLOGIES

Industrial Metaverse Battlefield

Those who have been following the Metaverse since the phrase was coined by science fiction writer, Neal Stephenson, have realised early on that the Industrial Metaverse will be the most competitive battlefield for industries in the future.

The reason is simply that the value of the Metaverse is in lockstep with the "real world" value it can contribute. Now it is true that the Metaverse will take on a multitude of forms, ranging from entertainment to gaming to social media, etc.

But the place where digital dreams will collide with physical reality is in the Industrial Metaverse. It is here that digital twin technology will not only be used for fun but also to create giant digital twins of the real world.

Industrial Metaverse Battlefield

Digital worlds based on real-time data will allow corporations to have multiple iterations and simulations of themselves. Lessons learned and breakthroughs discovered in the Industrial Metaverse will provide feedback into reality, enabling companies to change real-world parameters to optimise everything!



By Wilhelm Swart, Chief Operational Technologies (OT) Officer - 4Sight

The Industrial Metaverse will be the most competitive battlefield for industries in the future.



"The metaverse is this digital world that lives alongside our physical one and allows us to live, work and play alongside each other. And digital twins are the foundations that the metaverse will be built on."

David-Weir McCall

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Digital Twins and the Industrial Metaverse

The digital twin market was projected to grow to \$29.57 billion by 2025, which is a staggering CAGR of 61.95%. But a new report by Grand View Research suggests that the market may reach \$86.09 billion by 2028. Industry 4.0 use cases remain the main drivers behind the digital twin market, as the demand for asset health optimisation and predictive maintenance continue to grow. Industrial IoT solutions will give rise to Smart City and Smart Building infrastructure, and the Metaverse will be the battlefield for emerging technologies to prove their worth for real-world applications.

Blurring All Lines

Traditional Mining Companies for instance may become little more than asset owning companies whose assets are managed by companies who can combine past technical expertise with digital twins that exist in the Metaverse.

1

Mining companies don't need equipment to dig holes in the ground, they simply need holes in the ground.

2

Mining companies don't need ore on a conveyor belt, but precious metals that are ready to be sold.

3

Mining companies don't need refineries managed through experience and trial and error, but by the future experience obtained from digital twins. Envisioning technologies that can reveal multiple futures based on constant real-time information and past data are the new digital gold.

Metaverse as Creative Freedom

One of the definitions of the Metaverse that we like is one given by the Zhiwu AIoT Industry Research Institute:

The Industrial Metaverse is a new ecosystem in which new information and communication technologies represented by the Internet of Things, artificial intelligence, and digital twins are deeply integrated with the real economy. A new manufacturing and service system for the entire value chain.

Technology companies have long been restrained by various bottlenecks. Some of these bottlenecks includes technology that has been unable to deliver. Other bottlenecks have been caused by humans unable to be trained quickly enough in the full utilisation of technologies.

The Industrial Metaverse will unleash a new era of creative freedom for companies to play around with ideas and test technologies without the costs or bottlenecks associated with real-world implementation.

The winners will not only be those who can dream the biggest dreams, but who can implement into the real world that which they have learned in the Industrial Metaverse.



Industrial Metaverse Playing Field

There are many virtual spaces in which the Metaverse will be accessible. Many of these will be public and will be created through large scale collaborations by multiple stakeholders. Some will be purely speculative with anonymous digital avatars, and others will be based in reality.

The Industrial Metaverse will be different in terms of its playing field. Corporations will have, own, and inhabit a private Metaverse that may or may not be linked to other instances. The main areas where the industrial Metaverse will take place are:



Digital Twins

People and employees participate with their real identities as digital avatars, in digital twins that reflect the whole life cycle process of physical equipment through the mapping of real things in the virtual world, based on actual physical schematics, with the real world and real-time data incorporated into the world.



Beyond Reality

Same as the above, but adding calculation and analysis of the real world in the virtual world, thereby enhancing the digital world as a way to improve and enrich the real world.



Right and Ready!

4Sight's OT cluster is excited to be leading the charge toward creating and establishing the Industrial Metaverse. Not only have we partnered with the world's leading creators of Industry 4.0 technologies, but are actively moving forward with our partners to place our clients ahead of the curve in order to ensure maximum benefit from the growth of the Industrial Metaverse.

